



CLASSROOM INNOVATION IN MATHEMATICS GRANT 2010-11

OVERVIEW

Purpose: From 2005 to 2009, state scores in mathematics were stagnant, rising only one percentage point over the four-year span. At the state level, IDOE is currently exploring new, innovative classroom strategies that will help to push mathematics in Indiana forward. One such strategy is the integration of digital curriculum and technology into traditional teaching methodologies.

The purpose of the program is to provide a select number of LEAs with the opportunity to use digital mathematics curricula, technology-based instruction, and interactive white boards in lieu of traditional textbooks. This grant provides an opportunity for LEAs to pilot digital curriculum which can be readily aligned to changes in standards and to determine its effectiveness with their student populations and within their contexts. Following the grant, LEAs will either continue the use of digital curriculum through their textbook rental program or discontinue use of the digital curriculum and seek an alternative for curricular materials. Digital curriculum would need to utilize innovative strategies for instruction and represent a significant break from the traditional textbook-oriented instruction and be approved by the IDOE, but it would not serve as a standalone, online course that replaces the classroom teacher. In order to evaluate the effectiveness of these strategies, awards will be limited to schools that propose plans for either: 6th Grade, 7th Grade, 8th Grade, and/or Algebra I. The results of this pilot program will be used to evaluate the effectiveness of digital curriculum and provide data for schools that may look at adopting digital mathematics curricula in the future.

This grant program is funded through the David C. Ford Fund.

Application: Please fill out each part completely. For assistance, you may contact Zach Foughty at zfoughty@doe.in.gov or Phone: (317) 233-5019

I. GENERAL INFORMATION

1. Corp# 5485	2. Corp Name Plymouth Community School Corporation		
3. Corp Address (Street, City, State, Zip) 611 Berkley St., Plymouth, IN 46563			4. Telephone (574)936-3115
5. Contact Person's Name Mr. Dan Funston		6. Contact Person's Email Address dfunston@plymouth.k12.in.us	
7. Contact Person's Address (Street, City, State, Zip) 220 North Liberty St., Plymouth, IN 46563			8. Contact Person's Telephone (574)936-3113
9. Superintendent's Name Mr. Dan Tyree		10. Superintendent's Email Address dtyree@plymouth.k12.in.us	
11. # of Schools Participating 2	12. # of Students Being Served 840 Grades 6-8		13. # of Teachers Participating 8





II. Project Abstract

Briefly describe the proposed project clearly and concisely using the space provided.

The Classroom Innovations in Math will give Plymouth Community Schools an opportunity to move forward with plans we have had to increase the use of technology in our classrooms as a means to increase student engagement and relevancy. Our ultimate goal is that increased engagement with technology will increase student achievement. Our project plans include both middle level schools in our district, Riverside Intermediate School and Lincoln Junior High School. All 6th through 8th grade students in our school district will participate.

Our Classroom Innovations in Math project will be the full implementation of a digital curriculum with the use of Agile Minds as our vendor. The project includes the purchase of the curriculum subscription, professional development for our teachers, interactive white boards, additional computers, and adding Algebra to the list of assessments already administered through Acuity at our schools.

We have two project goals that will result in increased student achievement in math. First, we want to increase student engagement through the use of technology. Secondly, we want to strengthen our assessment program to better benchmark students for mastery and for progress monitoring. The implementation of Algebra with Acuity and the built in assessments that come with the Agile Mind program will both help us meet our assessment goals.

Plymouth Community Schools has demonstrated a commitment to the effective use of technology in our classrooms. First, during last year's social studies textbook adoption cycle Lincoln Junior High School chose to use the flexibility the state provided and not adopt social studies textbooks in the 8th grade. We felt the social studies textbooks were not well written and believed we needed to adopt alternative resources that would increase engagement. We purchased laptops and Scholastic readers through our textbook rental. We then trained our teachers in the use of moodle and other resources to ensure good implementation. Thus far, the results of our common assessments are promising. Secondly, we have shown a local commitment to technology by using capital projects money to turn our 7th grade language arts classrooms into one to one rooms. Next, PCSC was involved in the initial roll out of Acuity in Indiana. We currently administer the Predictive tests in 6th-8th grades and use the data to place students in remediation or enrichment classes based on their mastery. The addition of Algebra as a test would allow us to assess all of our students in the math course they are currently enrolled in. Lastly, our math teachers have shown a strong commitment to the implementation of technology in their classrooms through their support of this grant application and their willingness to explore alternatives to textbooks before the state announced this grant opportunity.



Please complete one grant narrative for your LEA which includes all schools. Narratives should be double spaced, 12pt Times New Roman font, and not to exceed 10 pages.

III. GRANT NARRATIVE

Software Choice and Rationale: Identify the digital content program you have selected. Describe how this program aligns with the purpose of the grant. Describe how this program will address the instructional needs of your students and teachers.

We have selected Agile Mind as the vendor for our digital curriculum. Agile Mind was chosen for its commitment to a curriculum aligned to the NCTM standards, the pedagogical support and tools it provides, the real world simulations that can be used with an interactive whiteboard, its focus on vocabulary, and a strong assessment/reporting component. Agile Mind also represents a research-based approach from the Dana Center at the University of Texas in Austin. Their commitment to strong research will assure our school community that we are delivering research-based instruction.

The scope and sequence of the courses in Agile Mind are neatly organized and presented within the site. We found this to be extremely beneficial when exploring our alternatives. Our math department was able to compare our local pacing guides to the curriculum in the Agile Mind courses and found them to be similar. We also found Agile Mind to be challenging and tiered which will help our teachers differentiate their instruction.

We found the pedagogical support built into the Agile Mind system far superior to the other vendors. Agile Mind's program provides support for the direct delivery, guided practice activities, time management, and pre-teaching aspects of the program. The best feature of Agile Mind is that it is a system that we feel will be beneficial in the long term. The system gives teachers the ability to add their own notes to the online teacher guides which will help teachers organize their instruction for years beyond the pilot year of this program.

The real-world simulations built into Agile Mind are able to be implemented with the use of an



interactive white board. This differentiates the product from other vendors we explored. Much of the content delivery and student interaction with other programs was directly through a computer. Agile Mind's program allows for some whole-group instruction incorporating the digital curriculum through the use of the whiteboard. The characters in the curriculum have been created with middle school students in mind.

Plymouth School Corporation has a strong vocabulary program K-12. We use a tiered approach to vocabulary with content specific and cross-content word lists that are taught using Marzano's Six Step approach. We have vocabulary instruction built into our pacing guides and built into our school day. Agile Mind is very strong with the content-specific math vocabulary. Many of the vocabulary words emphasized in Agile Mind are the same vocabulary words that are a part of our adopted curriculum. Agile Mind's approach to teaching vocabulary also aligns with Marzano's Six Step process.

Lastly, we chose Agile Mind because we feel the assessment component is very strong. Agile Minds takes a systemic approach to assessment and data reporting. Teachers can use the guided assessments to gauge student progress or assess their readiness. Self-tests are built in for meta-cognition, and test items are available to be embedded in quizzes and tests. The data reporting tool is easy to use and will benefit teachers in that they will not have to spend time scoring papers. Instead they can spend their time reviewing student mastery levels and planning for differentiated instruction.

Professional Development: Describe the PD needs of your teacher for using interactive whiteboards and implementing digital curriculum and detail the specific plan for meeting those needs.

Before the Classroom Innovation Grant was made available, we were exploring the purchase of the Promethean interactive white boards system. We specifically targeted the Promethean system



because local school districts that use them have told us the face to face professional development was outstanding. Probably more important than the face to face professional development, Promethean facilitates an online community called Promethean Planet. This is a group of thousands of users who post ideas and actual lessons to an online forum. The posted lessons are lessons that are ready to use right away.

Recently, Plymouth Community Schools signed onto a demo program with Promethean. All of the math teachers included in this grant will have 60 days to become familiar with the boards before receiving face to face training after the purchase of the system. In addition to this training, we will encourage the use of the Promethean Planet for ongoing professional development.

The Professional Development that comes with Agile Mind will consist of face to face seminars. During the face to face training, teachers will have the opportunity to explore Agile Mind, learn how to use the planning and assessment tools, and learn how to collaborate using common lessons and assessments. All middle level teachers currently meet every week to plan and reflect on common assessments and instructional strategies so this training will be very beneficial to our efforts. In addition (and most importantly), teachers will have face to face training on how to analyze student work.

Implementation Plan – Digital Content: Describe your plan for monitoring the implementation of the digital content with fidelity to program guidelines.

We will use two means for monitoring implementation of the digital content. First, we currently monitor the curriculum through our professional learning communities. Teachers in each department meet once a week with the principals to create and reflect on short cycle common assessments that assess our “power indicators.” We use the results to differentiate our instruction and to ensure our teachers are following the curriculum. Our plan would be to continue to use this means to monitor the curriculum. Secondly, we conduct walkthrough observations on a daily basis. We use a google



form to keep data on instruction and student engagement. The data from the form is automatically plugged into a spreadsheet that can be manipulated. We would continue both of these processes that are already firmly embedded into our practice to monitor the implementation of the digital curriculum and to ensure it is being used for at least 80% of instruction.

Implementation Plan – Interactive Whiteboards: Outline your current inventory of interactive whiteboards, how you can realign current inventory to meet program goals of one interactive whiteboard per classroom mathematics teacher, and what funds you would apply for in order to address these gaps.

We currently have no inventory of interactive whiteboards. We have signed up for a 60 day trial with Promethean that will place boards in all of our math classrooms. By signing up for the trial period, we will save 50% on the cost when we make the purchase. Our plan is to apply for the \$3,500 per teacher included in this grant to purchase the eight whiteboards. If we do not receive all of the grant, we will try to use local capital project funds to supplement the grant to ensure all of our math classrooms have interactive whiteboards. The boards and learning response systems that are included have been quoted at \$3,049.

As previously mentioned, we have chosen to pursue the Promethean system for interactive whiteboards for the professional development. In addition to this, Promethean's system is ready and tested for Acuity. We can administer local assessments created in Acuity using the Promethean system and we can also administer the objective questions that are part of the Predictive tests in Acuity using the Promethean system.

Implementation Plan – Online Assessments: Describe each school's capacity and commitment to administer online ISTEP+ and ECA assessments, as well as Acuity Assessments, both with and without additional lab space that grant funds could provide. Describe how teachers will ensure that students are trained on how to properly complete online assessments.

Both schools are in their second year as Acuity users. We currently administer the Predictive tests in Acuity for all of our Math students grades 6-8. We administer the 8th Grade Math Predictive test to our Algebra and Geometry students. The Classroom Innovation Grant will provide needed



funds to expand our testing to Algebra students. We already administer all of our Acuity tests online over a 6 day time period.

We currently administer the ECA to all of our students in Algebra using computers.

Our plan is to continue to administer Acuity and the ECA assessments online. We would also like to administer the ISTEP+ online if we are able to add to our lab capacity with this grant. We currently have three computer labs and 150 10 inch netbook computers at Lincoln Junior High School. Riverside Intermediate School has 2 computer labs and 20 netbook computers.. The netbook computers are not ideal to administer assessments on because of the screen size. We feel that with the Classroom Innovation Grant we will be able to add one mobile lab in each building which will increase our capacity to give ISTEP+ online. At both schools, we hope to add an additional lab with local funding. If this can be accomplished, LJH could administer ISTEP+ online over a 6-7 day window. Riverside Intermediate School would need one more lab the following year to ensure they can give the ISTEP+ online in every subject.

Our teachers train students on how to properly complete online assessments continually throughout the year. In addition to the formal assessments we currently give online, our math department administers additional assessments on Acuity through the instructional resources. Our plan is to expand the use of Acuity for common assessments as well. Therefore, students will have ample time to practice taking online assessments.



Indiana Department of Education
SUPPORTING STUDENT SUCCESS

IV. BUDGET

See program overview for allowable costs. List each expenditure on a separate line.

Expenditures Budget (Use a separate line for each expenditure, and add rows as needed)				
<u>Expenditure Description</u>	<u>Person Responsible</u>	<u>Cost per Unit</u>	<u>Number of Units</u>	<u>COST</u>
Digital Curriculum Subscription				
Agile Minds Digital Curriculum	Dan Funston	\$30.00	840	\$25,200
Professional development reimbursements				
Agile Mind PD, 2 day stipend, 23.93 an hour	Dan Funston	143.58 per day	16	\$2,297.28
Interactive whiteboard (list make and model number)				
Promethean ActivBoard 387 Pro	Janice Curtis	\$2,099 (includes installation)	8	\$16,792
Cost for Acuity Algebra administration (per student)	Dan Funston	\$2.00	110	\$220.00
Costs related to online assessment	Dan Funston			
Laptops	Dan Funston	\$850	60	\$51,000 (\$25,500 per school)
			Total Funds Requested	\$95,509.28

LOCAL SHARE*

*This is not a requirement for the grant, but it will help us to determine the additional resources need at the local level.

Expenditures Budget (Use a separate line for each expenditure, and add rows as needed)				
<u>Expenditure Description</u>	<u>Person Responsible</u>	<u>Cost per Unit</u>	<u>Number of Units</u>	<u>COST</u>
Interactive Whiteboard Training, One Day Stipend	Janice Curtis	\$143.58 per day	8	\$1,148.64
Interactive Whiteboard Training, Trainer Cost	Janice Curtis	\$2,000	1	\$2,000
Laptops	Dan Funston	\$850	60	\$51,000
Promethean Active Expressions Learning Response System	Dan Funston	\$1350	8	\$10,800

	Total Funds Requested	\$64,948.64
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V. ASSURANCES

By checking each box below, you agree to the following assurances:

- ☒ The LEA assures that Acuity online assessments will be administered to assess student growth during the grant period (e.g. Acuity Predictive or Pre/Post Test; the exact assessments will be determined by the DOE, but will not exceed 3 tests during the school year, excluding ISTEP+ and ECA).
- ☒ The LEA assures that, given favorable results on a statewide level, it will give serious consideration to sustained use of digital curricula in all schools in the LEA until the next textbook adoption cycle (2016-17 school year).
- ☒ The LEA assures that the selected digital curriculum will be implemented, with fidelity, as the core curriculum for all mathematics classrooms (6th Grade, 7th Grade, 8th Grade, and/or Algebra I) at each school that receives grant funds, for the duration of the school year. "With fidelity" implies that districts will take the steps necessary to implement the digital curriculum as outlined by the vendor.
- ☒ The LEA assures that teachers will be provided with professional development necessary to implement digital curriculum with fidelity. Professional development includes, but is not limited to, training on digital curriculum software, integrating interactive whiteboards into a standards-based classroom, and using Acuity assessments to guide instruction.
- ☒ The LEA assures that funds used for interactive whiteboards will remain in mathematics teacher classrooms for the duration of the program. Any realignment of current inventory for these purposes will also remain in effect for the duration.
- ☒ The LEA assures that all 7th and 8th grade students in Algebra I will take the Algebra ECA online.
- ☒ The LEA assures that all students will take the ISTEP+ online, unless the school can demonstrate an inability to test all students online.
- ☒ The LEA assures that all teachers that use digital curriculum will participate in an *anonymous* evaluation of the program to determine its ability to impact teaching methods.
- ☒ The LEA assures that classrooms in which digital curriculum is being used will be available for observation by certain members of the Department of Education, with reasonable notification, to provide for a qualitative analysis of program effectiveness.
- ☒ The LEA assures that all students will complete a survey regarding the effectiveness of the digital curriculum.
- ☒ The LEA assures that all hardware and software implementations will be put in place before the start of the 2010-11 school year and that professional development related to this program will begin before the start of the 2010-11 school year.
- ☒ The LEA agrees to keep such records and to provide such information to the State educational agency, as may be reasonably required for fiscal audit and program evaluation (consistent with the responsibilities of the State educational agency under this part).



VI. SIGNATURES

List the management team of this grant for each school. Each member of the management team should also sign below. Complete this sheet for *each* school that is included in the district's implementation plan.

School Name:

Grade Levels:

	<u>NAME</u>	<u>POSITION</u>	<u>Signature</u>
1.	Daniel Tyree	Superintendent	<i>Daniel Tyree</i>
2.	Rodger Smith	District Math Coordinator	<i>Rodger Smith</i>
3.	Daniel Tyree	District Assessment Coordinator	<i>Daniel Tyree</i>
4.	Dan Funston	Principal	<i>Dan Funston</i>
5.	Denise Ecker	Math Department Chair	<i>Denise Ecker</i>

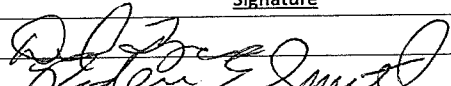
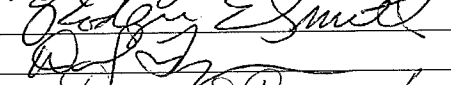
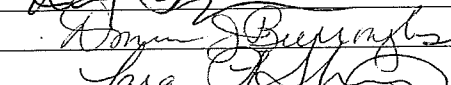
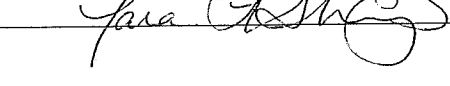


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1.	Daniel Tyree	Superintendent	
2.	Rodger Smith	District Math Coordinator	
3.	Daniel Tyree	District Assessment Coordinator	
4.	DONNA BURROUGHS	Principal	
5.	TARA SHARP	Math Department Chair	